REMARKS

Applicant has received and reviewed an Office Action dated March 2, 2007. By way of response, Applicant has canceled claims 83, 87 and 92-130 and amended claims 78-80, 82, 84-86, 88 and 90. Claims 78-82, 84-86 and 88-91 are pending. No new matter is presented. Applicants submit that the claims are supported by the specification.

For the reasons given below, Applicants submit that the pending claims are in condition for allowance and notification to that effect is earnestly solicited.

Restriction Requirement

Applicant acknowledges that elections of claims and species has been made final.

Priority

The Office Action notes a discrepancy between the application data sheet and the priority claim in the application. Applicants regret the error in the application data sheet and submit a corrected application data sheet herewith.

Rejections under 35 U.S.C. § 112

The Office Action rejected claims 78–92 and 94–96 under 35 U.S.C. § 112, second paragraph. The Office Action objected to certain terms and phrases employed in the claims. Applicants respectfully traverse this rejection.

Claim 78 has been amended to recite "the regions of immobilized building block molecules on the solid support are a heterogeneous building block array", which adds the feature suggested in the Office action.

Claim 90 was amended to remove the term objected to in the Office Action.

Claims 92 and 94-96 have been canceled, which renders the rejection moot for these claims.

Accordingly, Applicant submits that the amended claims fully comply with § 112, second paragraph, and withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 78–84, 86–92 and 94–96 under 35 U.S.C. § 102(b) as anticipated by Korbel et al., *J. Am. Chem. Soc.* **123**: 361–62 (2001). The Examiner rejected claims 78–84, 86–92 and 94–96 under 35 U.S.C. § 102(b) as anticipated by Maly et al., *Proc. Natl. Acad. Sci.* **97**: 2419–24 (2000). The Examiner rejected claims 78–84, 86–92 and 94–96 under 35 U.S.C. § 102(b) as anticipated by Shao et al., *J. Org. Chem.* **61**: 6086–87 (1996). The Examiner rejected claims 78–84, 86–92 and 94–96 under 35 U.S.C. § 102(b) as anticipated by Pirrung., *Chem. Rev.* **97**: 473–88 (1997). The Examiner rejected claims 78–84, 86–92 and 94–96 under 35 U.S.C. § 102(b) as anticipated by Balch, U.S. Patent No. 6,083,763. The Examiner rejected claims 78–84, 86–92 and 94–96 under 35 U.S.C. § 102(b) as anticipated by New et al., WO 01/001140. The Examiner rejected claims 78–84, 86–92 and 94–96 under 35 U.S.C. § 102(b) as anticipated by Stålberg, WO 93/025910. The Examiner rejected claims 78–92 and 94–96 under 35 U.S.C. § 102(e) as anticipated by Lahiri et al., US2003/0138853. Applicants respectfully traverse these rejections.

Independent claim 78 recites a method of making an array in which 2, 3, 4, 5, or 6 building block molecules are independently and covalently coupled to a solid support in regions that are contiguous portions of the surface of the solid support. A first region includes a first combination of building block molecules and a second region includes a second combination of building block molecules. Each building block molecule independently is of the formula:

$$\text{framework-(recognition element)}_n$$

in which:

n=1, 2, or 3; each recognition element is independently covalently coupled to the framework; and the framework comprises a functional group effective for covalent coupling to a support or a linker;

the framework is alkyl, substituted alkyl, cycloalkyl, heterocyclic, substituted heterocyclic, aryl alkyl, aryl, heteroaryl, or heteroaryl alkyl; substituted with 1 to 4 functional groups;

the functional groups independently being carboxyl, amine, hydroxyl, phenol, carbonyl, or thiol;

each recognition element is independently a 1-12 carbon alkyl, substituted alkyl, cycloalkyl, heterocyclic, substituted heterocyclic, aryl alkyl, aryl, heteroaryl, or heteroaryl alkyl

moiety; substituted with a group with a property of positive charge, negative charge, acid, base, electron acceptor, electron donor, hydrogen bond donor, hydrogen bond acceptor, free electron pair, π electrons, charge polarization, hydrophilicity, or hydrophobicity;

with the proviso that one or more recognition elements, the framework, or one or more recognition elements and the framework comprises an amino acid.

Applicant respectfully submits that the cited references neither teach nor suggest such a method of making an array.

Accordingly, based on the foregoing differences, Applicant respectfully submits that the references cited in the prior art rejection neither teach nor suggest the presently claimed methods, and withdrawal of this rejection is respectfully requested.

Double Patenting

Claims 78–92 and 94–96 were provisionally rejected for non-statutory obviousness-type double patenting over claims 85–105 of copending U.S. Application No. 10/244,727. Applicants respectfully traverse the rejection.

If this rejection remains when the claims are otherwise in condition for allowance, Applicant will submit a terminal disclaimer, if appropriate.

Summary

Applicant submits that the claims of the present application are in condition for allowance and notification to that effect is earnestly solicited. The Examiner is invited to contact Applicant's representative at the telephone number listed below, if the Examiner believes that doing so will advance prosecution.

Respectfully submitted,

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MTS:kf